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## KOREAN PATENT ABSTRACTS

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(71)Applicant: **LG INFORMATION & COMMUNICATIONS LTD.**

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## (54) METHOD FOR SYNCHRONIZING FRAMES USING OPTIMUM PILOT SYMBOL

(57) Abstract:

PURPOSE: A method for synchronizing frames is provided to supply a new pilot symbol pattern considering a space time transmit diversity (STTD) to perform optimum frame synchronization in a downlink, so as to exactly and quickly synchronize the frames by the new pilot symbol pattern. CONSTITUTION: An optimum pilot symbol obtains initial frame synchronization by using offset information received through a downlink channel. The optimum pilot symbol identifies whether the

obtained frame synchronization is successful, by using a preset pilot sequence. The pilot symbol finally decides the frame synchronization. If the frame synchronization is deviated, the pilot symbol repeatedly performs the process of obtaining the initial frame synchronization. The pilot symbol repeatedly carries out the procedure of identifying the frame synchronization with each frame unit. The pilot symbol observes a correlation processing result using the pilot sequence to decide whether the frame synchronization is successful. If the correlation processing result presents maximum correlation values of different polarities in a starting point and an intermediate point during a correlation processing period, and if the result presents 0 correlation values in other points, the pilot symbol decides the result as successful.

